

Title (en)

GAS COOLING TYPE VACUUM HEAT TREATING FURNACE AND COOLING GAS DIRECTION SWITCHING DEVICE

Title (de)

VAKUUMWÄRMEBEHANDLUNGSOFFEN DER GASKÜHLART UND KÜHLGASRICHTUNGSSCHALTVORRICHTUNG

Title (fr)

FOUR DE TRAITEMENT THERMIQUE SOUS VIDE DE TYPE A REFROIDISSEMENT PAR GAZ ET DISPOSITIF DE CHANGEMENT DE SENS DE GAZ DE REFROIDISSEMENT

Publication

**EP 1643199 A4 20081210 (EN)**

Application

**EP 04724762 A 20040331**

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- JP 2003273411 A 20030711

Abstract (en)

[origin: EP1643199A1] A gas cooling type vacuum heat-treating furnace according to the present invention, includes a gas cooling furnace comprising a cooling chamber in which an article to be heat-treated is stationarily set, and defining therein a gas passage in a vertical direction, a gas cooling and circulating device for cooling and circulating gas flowing in the cooling chamber, a gas direction switching device for alternately changing over directions of gas vertically passing through the cooling chamber, and upper and lower straighteners blocking upper and lower ends of the cooling chamber, for causing a velocity distribution of the gas to be uniform.

IPC 8 full level

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Citation (search report)

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- [A] JP 2002333277 A 20021122 - CHUGAI RO KOGYO KAISHA LTD
- [A] US 5290189 A 19940301 - HEMSATH KLAUS H [US], et al
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- See references of WO 2005001360A1

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EP2006582A4; US2012220067A1; EP1726665A4; CN106500503A; EP2144026A1; EP3333526A4; US8734147B2; US7771193B2; US9082796B2; US7625204B2; US10774397B2; US9284641B2

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DOCDB simple family (application)

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